A0092
S920092

BERTOLINO

MOTORCYCLE USE PLAN

ATHENS UNIT - WAYNE NATIONAL FOREST

Bart H. Bertolino, Recreation Officer Wayne-Hoosier National Forest Feb. 1983

88

TABLE OF CONTENTS

Abstract i

Introduction 1

The Problem 2

Delimitations 2

Assumptions 3

Limitations 3

Review of Literature 4

Procedure 6

Data Collected 7

Summary of Data 15

Analysis of Data 18

Summary and Conclusions 21

Literature Cited 22

LIST OF FIGURES

Figure 1, 1982 Pattern of Motorcycle Use 8

Figure 2, Areas of Concentrated National Forest Lands 9

Figure 3, 1982 Pattern of Motorcycle Use by National Forest and Non National Forest Land 10

Figure 4, Pattern of Strip Mined Land 12

Figure 5, 1982 Pattern of Motorcycle Use on Strip Mined and Nonstrip Mined Land 13

Figure 6, 1982 Pattern of Motorcycle Use by Land Use Association 14

Figure 7, Area Where Motorcycle Use is Inappropriate 16

Figure 8, 1982 Motorcycle Use Area and Identified Sensitive Areas 17

LIST OF TABLES

Table 1, U.S. Total Motorcycle Registration, 1975-1979 1

Table 2, New Motorcycle Registration, 1975-1979 2

Table 3, Summary of the Pattern of Use 11

Table 4, Alternative Rating Sheet 19

ABSTRACT

Motorcycle use of the Athens Unit of the Wayne National Forest, which occurred prior to 1983, was unplanned and unregulated. Unplanned use was in violation of Executive Orders 11644 and 11989. Additionally, the use had a potential to cause unacceptable conflict with other forest users and unacceptable environmental damage.

An analysis of forest user opinion, land use patterns, and land condition indicated selective motorcycle area designation with use restricted to trails within the areas would be socially and environmentally acceptable. The analysis also indicated the use of strip mine lands in the central portion of the Unit would satisfy most users' desires.

Approximately 275 miles of trail and 27,500 acres of land would be needed to satisfy motorcycle demand. Further study would be required to locate exact use areas and trails.

INTRODUCTION

Prior to 1955, the motorcycle was used primarily as a means of transportation on streets and roads. In the late 1950's and early 1960's, the motorcycle gained popularity as a recreational vehicle for off-road use. The relatively inexpensive vehicles became more and more popular throughout the 1960's and into the 1970's.

As the number of off-road motorcycles increased, demand for riding areas also increased. Federally managed land across the country became the focus for off-road motorcycle riding. Environmental damage and conflict with other users became widespread.

President Nixon recognized the intensifying problem when he issued Executive Order 11644 on February 9, 1972. That Order directed public land managing agencies to "...establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various users of those lands." President Carter's Executive Order 11989 of May 25, 1977 reaffirmed President Nixon's Order.

On the Athens Unit of the Wayne National Forest, a formal plan has not been prepared. From 1972 to 1983, use has been allowed to occur without restraint. Although resource damage, for the most part, has not been unacceptable and user conflicts have not been serious, potentials for unacceptable resource damage and serious user conflicts are increasing rapidly.

Motorcycle popularity in Ohio ranks among the highest in the United States. Statistics gathered from 1975 through 1979 show Ohio as one of the top five states in the country in total motorcycle registration and annual new registration. Ohio is in the center of the four eastern states where motorcycling is most popular: Michigan, Illinois, Ohio, and Pennsylvania. The five year period depicted in the following tables gives strong indication that this popularity will probably continue through the 1980's.

TABLE 1

U.S. TOTAL MOTORCYCLE REGISTRATION
(in thousands)
1975 - 1979 1/

	RANKING				
YEAR	(1)	(2)	(3)	(4)	(5)
1975	Ca. 668	Pa. 339	Mi. 291	Tx. 273	**OH. 232**
1976	Ca. 667	Pa. 362	Tx. 270	Mi. 267	**OH. 254**
1977	Ca. 678	Tx. 285	Mi. 261	**OH. 253**	Il. 238
1978	Ca. 663	Il. 247	Mi. 242	**OH. 239**	Tx. 219
1979	Ca. 662	Il. 257	Mi. 256	**OH. 236**	Tx. 219

1/ U.S. Department of Transportation, Federal Highway Administration

TABLE 2

NEW MOTORCYCLE REGISTRATION
(in thousands)
1975 - 1979 1/

			RANKING		
YEAR	(1)	(2)	(3)	(4)	(5)
1975	Ca. 70	Tx. 50	**OH. 43**	Mi. 40	Il. 38
1976	Ca. 84	Tx. 57	Il. 40	Pa. 40	**OH. 40**
1977	Ca. 106	Tx. 68	Il. 41	**OH. 39**	Mi. 38
1978	Ca. 110	Tx. 62	Il. 35	**OH. 32**	Ny. 31
1979	Ca. 116	Tx. 78	Ny. 39	Il. 36	**OH. 33**

A continuation of unplanned, unregulated, unmaintained, off-road motorcycle use on Wayne National Forest lands in the Athens Unit will probably lead to unacceptable resource damage and serious user conflicts. Compliance with Executive Orders 11644 and 11989 relating to off-road vehicle use of public lands is essential.

THE PROBLEM

This paper will analyze 1982 use patterns, motorcyclists' desires, other forest user concerns, and resource capabilities. From the analysis, alternative solutions will be compared, and one of the alternative solutions will be recommended.

Proper location, design, and maintenance of facilities for off-road motorcycle use can adequately protect the physical resources. Social acceptability is the key to success of a plan for off-road motorcycle use of the Athens Unit of the Wayne National Forest. Analysis of use patterns, motorcyclist desires, other user concerns, along with resource capabilities will point the way to a socially acceptable plan.

DELIMITATIONS

This paper considered only the motorcycle demand and use of Wayne National Forest lands on the Athens Unit. Nearby State of Ohio lands or private lands were not considered as part of the recommended alternative because those lands have been closed to off-road motorcycle use, and it appeared as if that condition would continue well into the future. In addition, general patterns of use, ownership, and concerns were considered rather than specific tracts and individual opinions.

1/ New Motorcycle Registration, R.L. Polk & Co., Detroit, Michigan

ASSUMPTIONS

The 1982 use pattern and density of trails were acceptable to the motorcyclist. The trails were located and perpetuated by motorcycle riding. Also, the variety and challenge represented by the 1982 use pattern were acceptable to the motorcyclist because the trails were a product of motorcycle riding. Over time, the motorcycle users, without controls from Forest Service land managers, developed the type of riding experience they desired.

LIMITATIONS

The study was conducted from October 1982 to February 1983. The time was short, and it occurred during the time of year when very little use of Forest lands took place. In addition, a great deal more involvement was received from motorcyclists than was received from environmentalists and industry representatives. This resulted in a much clearer understanding of the motorcyclists' desires than other forest user concerns.

REVIEW OF LITERATURE

Motorcycle use of public lands raised concerns about the effects of such use. This concern generated a considerable volume of literature, both scientific and emotional, relating to effects on vegetation, soils, animals, and other public land users, particularly recreationists.

Connections between off-road vehicle use and adverse effects on vegetation, animals and soils have been made, but those connections have not been clear enough to give land managers an incontrovertible position against motorcycle use of all public lands. Connections between off-road vehicle use and adverse effects on other recreationists tended to be more easily documented and are more widely accepted as true.

As research continues, the connection between off-road vehicle use and adverse effects on vegetation, animals, and soils is becoming clearer. Certain sensitive areas exist in most geographical areas of the country, and management to avoid vehicular use in these areas appears to be advisable. Off-road vehicle use and resulting adverse effects on man's ability to find a place to escape the noise and confusion of daily life is becoming more widely accepted and documented. Avoiding motorized use of sensitive areas and careful separation of motorized use from other users is becoming a popular theme for management.

Watkins (1969) in his article in Cry California presented evidence that heavy unregulated use in the California desert caused a criss-crossing of routes which destroyed vegetation. Heavy concentrations of use in hill climb areas resulted in total loss of vegetation.

Fialka (1973) highlighted the erosion effects caused by narrow, small diameter motorcycle tires.

Harrison (1980) pointed out that the location of motorcycle use was critical. While operation of a motorcycle on a designated trail or in an appropriately located designated area could be completely acceptable, similar operations under similar conditions just five feet off the trail or in an inappropriate area could be environmentally devastating.

Bury (1980) studied the connection between vegetation loss and habitat reduction resulting in adverse effects to animals. He concluded that vegetation loss did have adverse effects on the animals, and the adverse effects were magnified when the vegetative loss occurred in aquatic areas.

Miller (1970) coupled impacts on vegetation in the Panoche Hills in California. He discovered that vegetation loss in meadow areas had a greater negative effect on animals and animal population levels.

Baldwin (1970) and California State University (1972) determined that disturbance occurring during nesting season and noise, either sustained or intermittent, caused a disruption in animals' important maintenance and reproductive behavior.

McReynolds and Radtke (undated) reviewed information concerning ORV - wildlife effects and concluded that the body of knowledge available was insufficient to give land managers in the northeastern United States a basis for an incontrovertible stand either for or against off-road vehicle use in the forest.

Hope (1972) determined that the motorcyclist was many times more capable of infringing on other users' enjoyment than was the reverse. Also, he stated that motorcyclists create 100 times more noise than a hiker or horseman.

Baldwin (1973) concluded that off-road vehicle use of the forest would result in inevitable conflicts with other traditional outdoorsmen. He agreed with Hope in the fact that off-road vehicle users could spoil outings for others, but the reverse was rarely true.

Fialka (1973) pointed out people's need to get away from the confusion, the artificiality, the noise, and fumes of motors. Many people turn to the forest for this release, but off-road vehicles cause them to encounter what they seek to escape.

PROCEDURE

In order to gather information relating to the desires of the motorcyclists who use the Athens Unit of the Wayne National Forest, a questionaire (Appendix Item A) was distributed to 196 motorcyclists in Ohio. The questionaire was designed by the Independent Dirt Riders of Ohio and was distributed from March 1982 to December 1982. The questionaires gave a sample indication of motorcyclists' desires, needs, and concerns. In addition, meetings were held on October 19, 1982, and December 6, 1982, with organized motorcycle groups to discuss their desires for use areas (Appendix Item C lists attendees.)

Other recreational users of the forest and the Forest's land managers' concerns and suggestions for motorcycle use were gathered through the distribution of 40 questionaires (Appendix Item B) during the months of January and February 1983. Environmental group leaders and land managers with direct knowledge of the Athens Unit were selected as those to receive the questionaires.

The concerns of industrial interests were gathered through the use of the same questionaire as used for environmentalists and land managers (Appendix Item B), and the distribution time of January and February 1983 was also the same. Local oil and gas drillers and strip miners who had operations on the Athens Unit were the only industrial interests contacted. Timber industry concerns were included in responses made by the Forest land managers responsible for the Forest timber program.

Information gathered through the use of the questionaires centered on (1) use restrictions, (2) recommended use areas, (3) areas not appropriate for motorcycle use, (4) area size recommendations, and (5) use area requirements. Data collected was not segregated by motorcycle enthusiasts, environmentalists, or land managers. The data were used as a montage of opinion and suggestion from the various interest elements.

Data concerning (1) 1982 motorcycle use areas on the Athens Unit, (2) 1982 areas of concentrated National Forest land on the Athens Unit, (3) 1982 pattern of strip mine use on the Athens Unit, and (4) percentage breakdown of 1982 motorcycle use on the Unit by strip mined use area, nonstrip mined use area, Forest Service administered land, and land other than National Forest were also gathered and mapped.

From the questionaire opinions expressed and the 1982 use characteristics, alternative operational modes were developed. Each alternative was evaluated on a numerical scale to determine relative merits. General categories of (1) motorcycle rider acceptability, (2) environmental acceptability, (3) industrial acceptability, (4) resource capability, and (5) administrative acceptability were used. A rating chart (Table 4, page 20), which breaks each general category into elements, was used to arrive at the numerical rating for each alternative.

DATA COLLECTED

General information gathered at the meetings held with organized motorcycle groups indicated the following factors were important considerations from the motorcycle users' standpoint.

A. Access
B. Challenge
C. Size of area and mileage of trail
D. Environmental variety

Access - Riders stated that use areas should have designated starting points which provide parking, toilet facilities, and garbage facilities. The starting points should be within 10 miles of major public highways. Camping facilities, such as tables and fireplaces, were listed as optional.

Challenge - Motorcyclists felt strongly that trails should provide varying degrees of challenge in vertical and horizontal alignment. Occassional steep grades (25 to 40 percent) and numerous short radius turns (less than 10 feet in radius) were desirable.

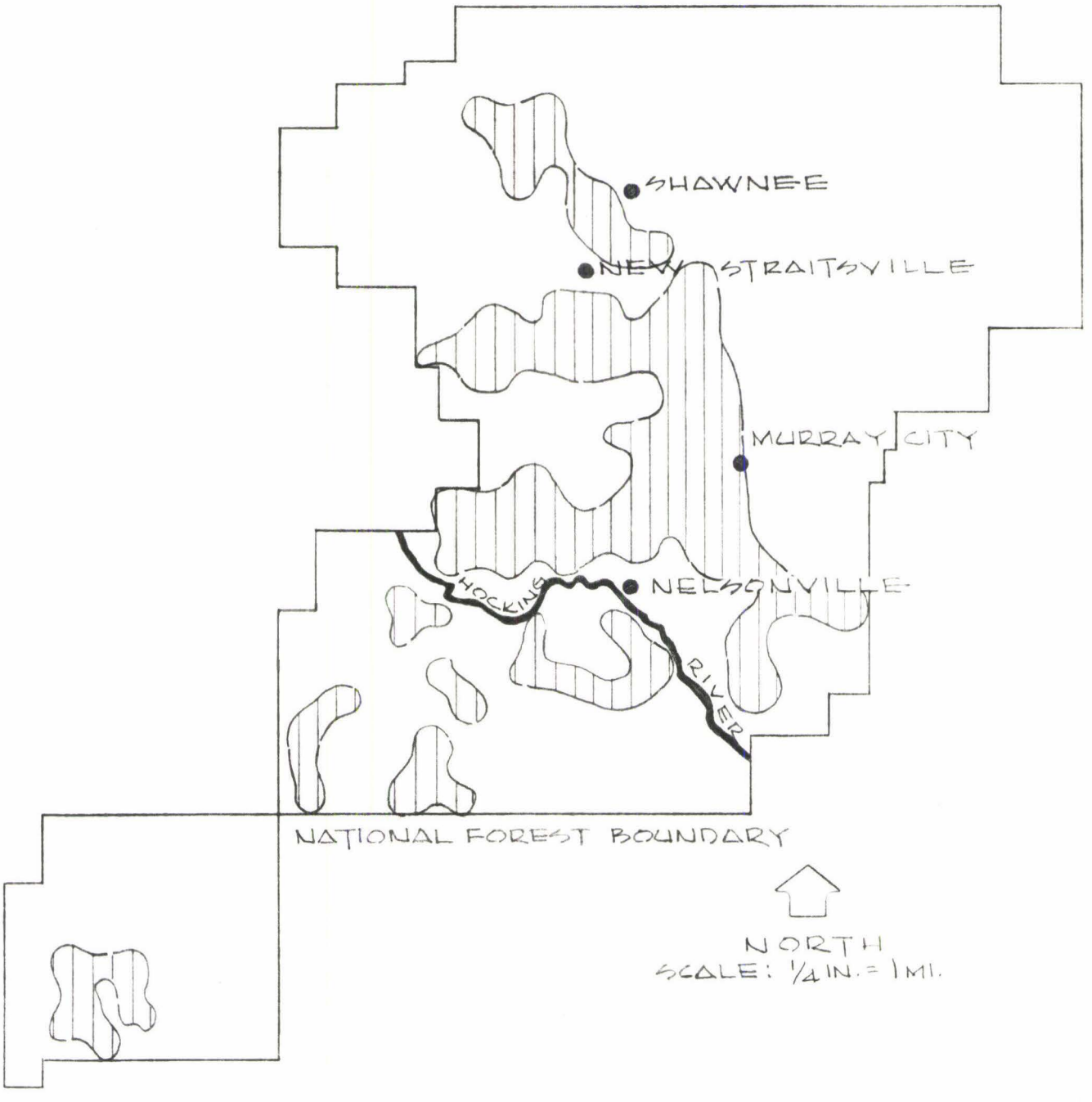
Size and Mileage - The 1982 use area (Figure 1) represented the popular riding locations. Within the 56,627 acres depicted in Figure 1, there were approximately 275 miles of trail or an average density of 1 mile of trail for every 205 acres. In the heaviest used area within the 56,627 acres, the density was 1 mile of trail for every 100 acres of land.

Environmental Variety - Rider preference was for areas which offered open space, forested land, brushy fields, and scenic vistas. Although the primary objective for a motorcycle outing was use of the vehicle, visual impressions along the way were considered important.

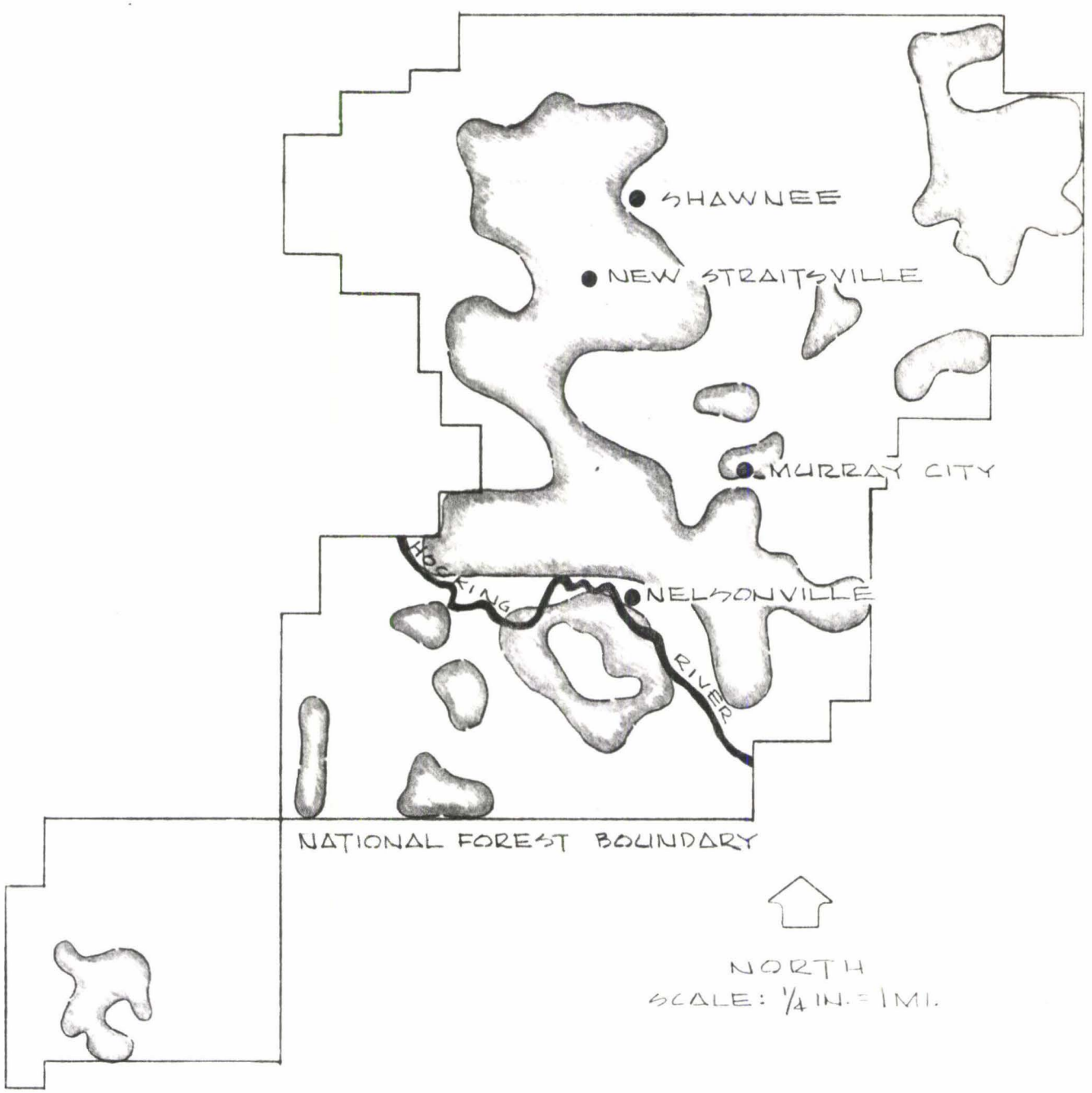
Information gathered from the 196 motorcycle user questionaires (Appendix Item A) indicated (1) 100 percent of the sample expected National Forest lands to be open to motorcycle use because it was public land; (2) 57 percent of the riders sampled rode as a family group; (3) 23 percent recognized the need for reasonable use restrictions; and (4) 9 percent cited the close proximity of Wayne National Forest lands to the riders as important.

Not all lands within the Athens Unit boundary were managed as National Forest. Private lands and Federal land (National Forest) were intermingled. Figure 2 presents the 70,750 acres where National Forest lands were concentrated. To determine the relative popularity of National Forest lands versus private lands, Figures 1 and 2, were combined in Figure 3. Nearly three-fourths (71%) of the motorcycle riding occurred on National Forest land. Most private lands used by motorcyclists appeared to be access ways to the primary riding areas, which were located on National Forest land.

FIGURE 1

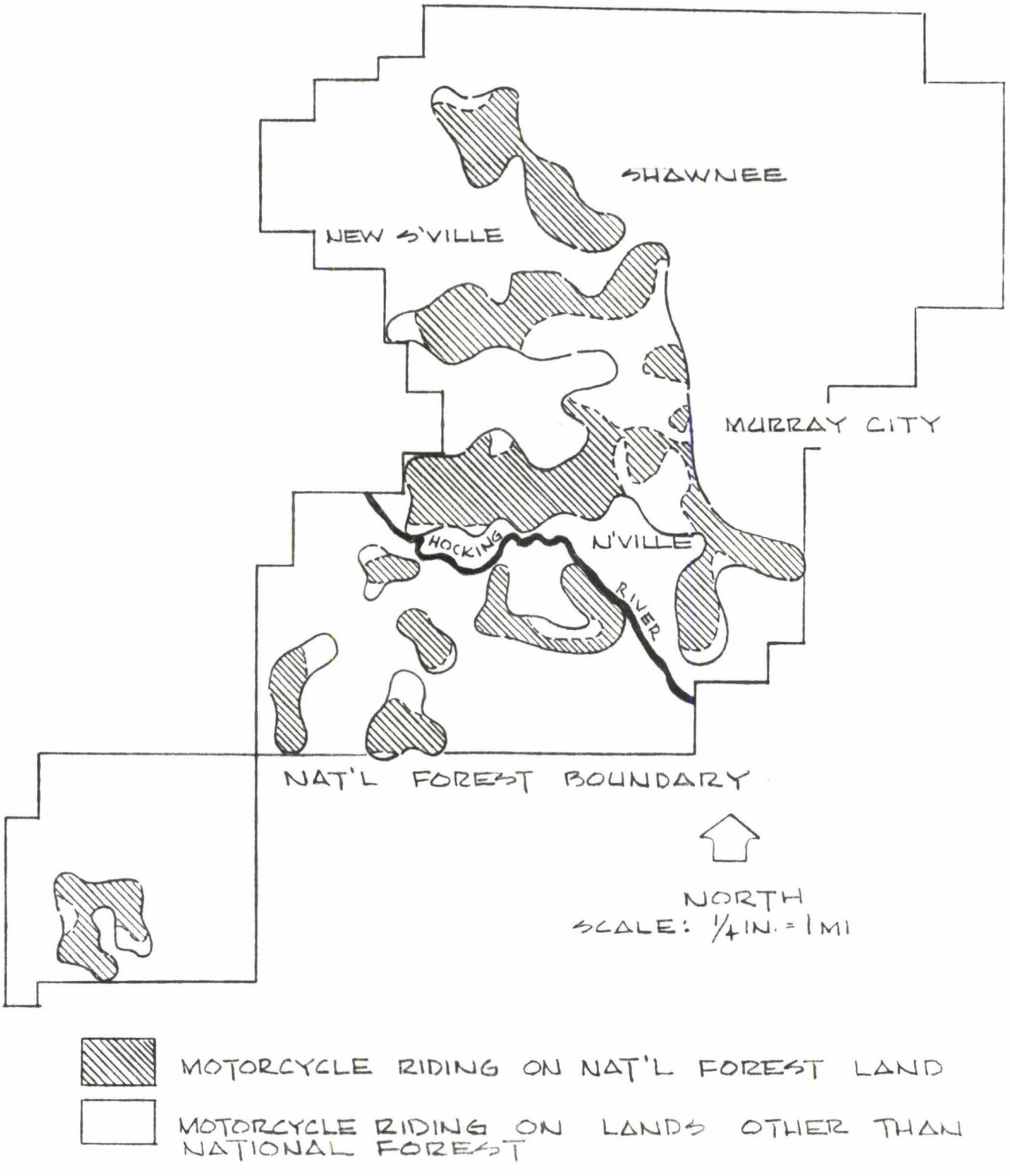


1982 PATTERN OF MOTORCYCLE USE
ATHENS UNIT - WAYNE NATIONAL FOREST



AREAS OF CONCENTRATED
NATIONAL FOREST LANDS
ATHENS UNIT - WAYNE NATIONAL FOREST

FIGURE 3



1982 PATTERN OF MOTORCYCLE USE BY NATIONAL FOREST & NON NAT'L FOREST

ATHENS UNIT- WAYNE NATIONAL FOREST

Indiscriminate, unauthorized use of private land is a major concern of private landowners. However, confusion about the exact location of property lines and the legal status of numerous County and Township road rights-of-way which dissect the landscape perpetuates the use. Private landowner concerns are occassionally so strong that the landowners oppose motorcycle use of National Forest land because of a fear that use will spill over onto private land.

A considerable amount of land within the Athens Unit was disturbed or affected by coal strip mining and coal hauling done in years past (Figure 4). The popularity of strip mined land for motorcycle riding was determined by combining Figure 1, 1982 Pattern of Motorcycle Use and Figure 4, Pattern of Strip Mined Land in Figure 5, 1982 Pattern of Motorcycle Use on Strip Mined and Nonstrip Mined Land.

Approximately one-half (28,570 acres) of the area affected by motorcycle use had been affected by previous strip mining activities. In the primary riding area north of the Hocking River (Figure 5), nearly 60 percent of the riding area was affected by strip mining. In addition, the riding areas north of the Hocking River, which were not strip mined, took on a clearer pattern of access to the stripped areas or connection of one stripped area to another.

The 1982 motorcycle use pattern resulted from unrestricted riding. The pattern represented user attitude about access, challenge, size, and variety constrained by resource availability. To gain a clear understanding of motorcycle user needs and desires, an analysis of the 1982 use pattern by ownership and condition was developed (Figure 6). A summary of the pattern of use shown in Figure 6 is shown below.

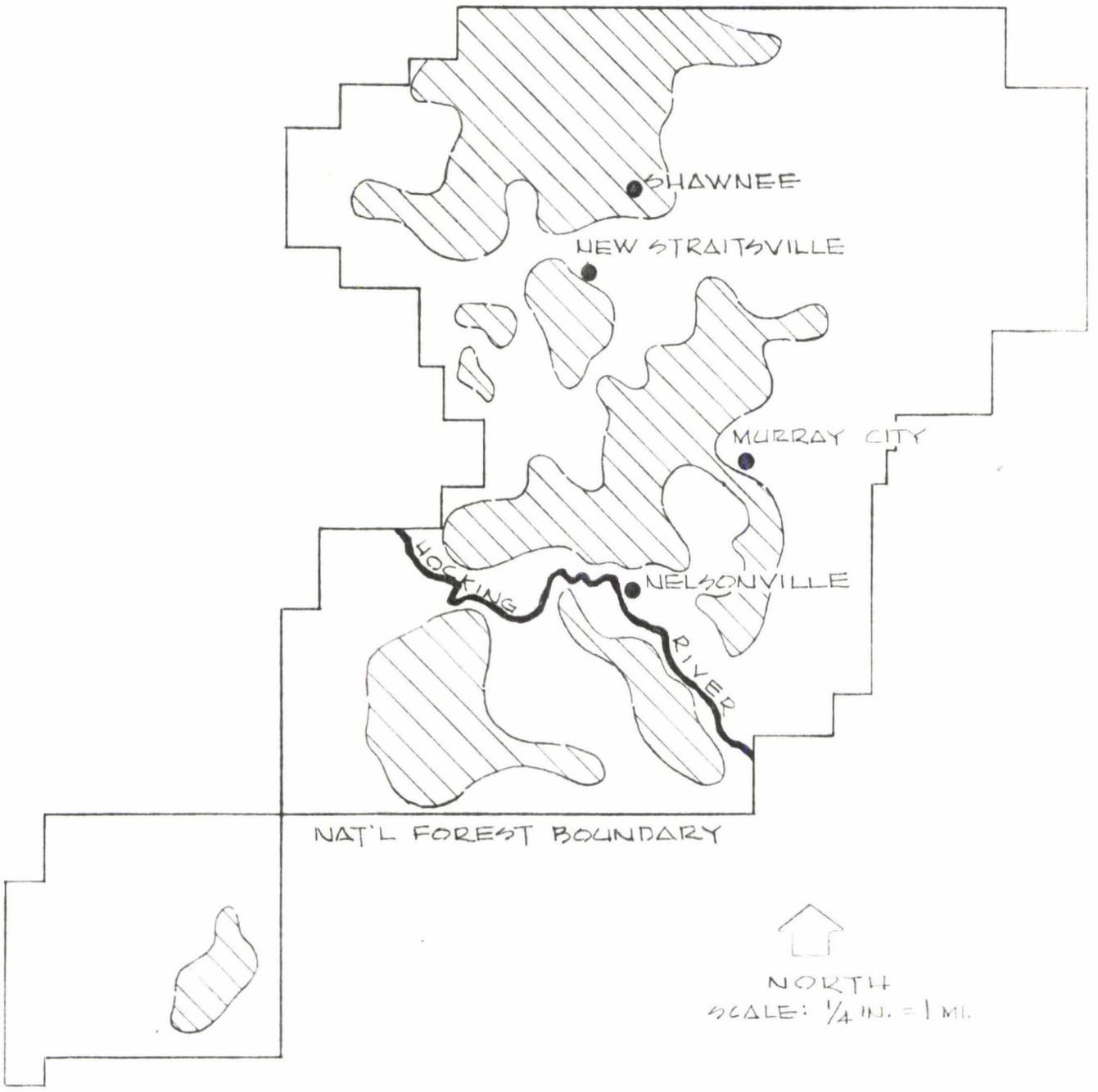
TABLE 3

TYPE OF LAND	ACRES	PERCENT OF USE AREA
A. National Forest Strip Mined	20,275	36
B. National Forest Not Strip Mined	19,660	35
C. Private Strip Mined	8,295	14
D. Private Not Strip Mined	8,397	15

Information gathered from environmental groups and other forest recreationists focused on (1) eliminating use from sensitive areas, (2) separating motorcycle use from other uses, (3) limiting the size of the area to be used by motorcycles, (4) stopping erosion, and (5) protecting animals. Most responses contained some reference to allowing people to use the forest for its quiet, natural environment. The absence of the sights and sounds of machines was suggested as desirable.

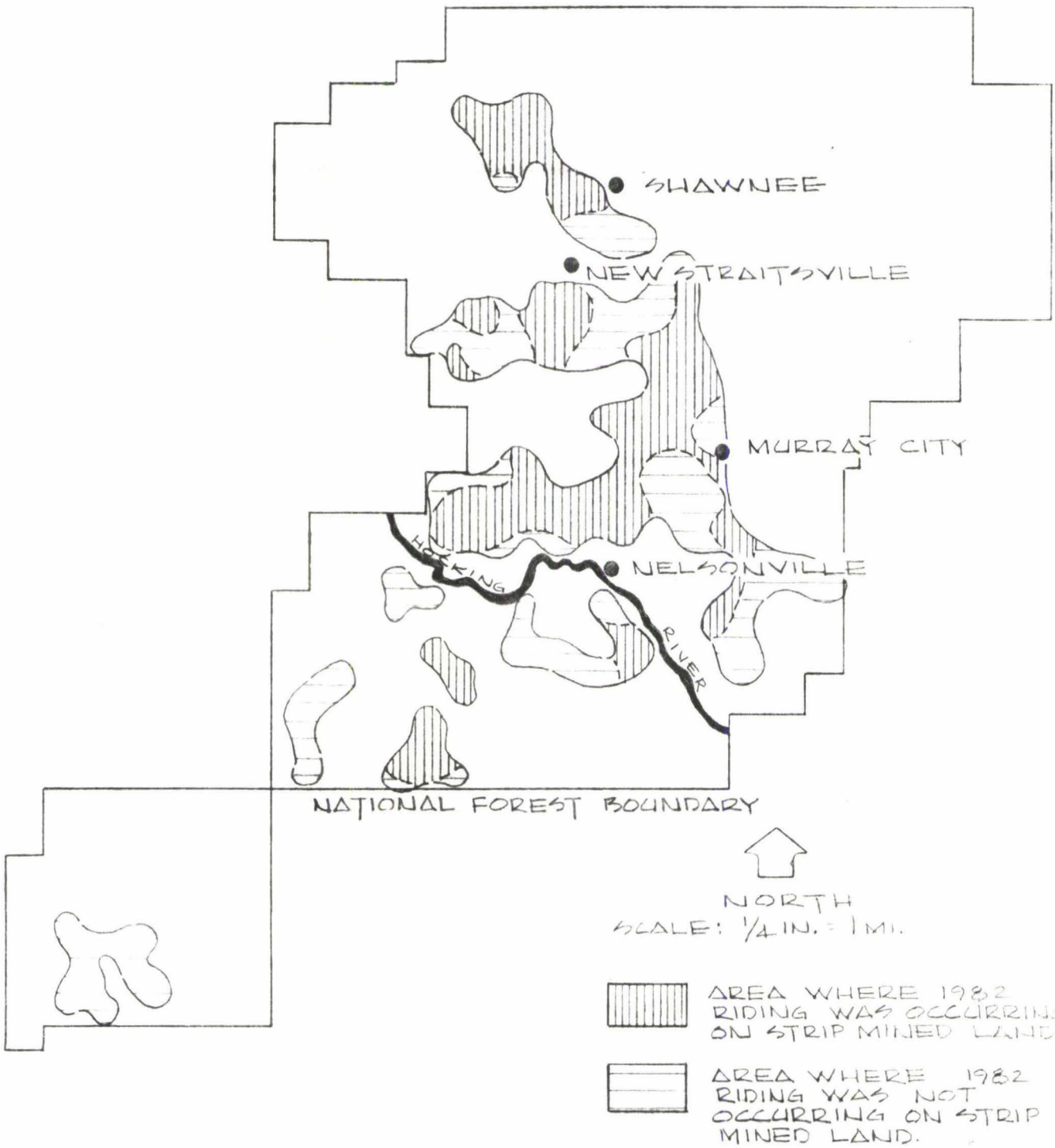
Industrial interests expressed only two concerns, both centering on the protection of private property. The first was vandalism to equipment caused by motorcycle riders. The second concern was their access being torn up in wet weather. However, the second concern centered around four-wheel drive vehicles more than motorcycles.

FIGURE 4



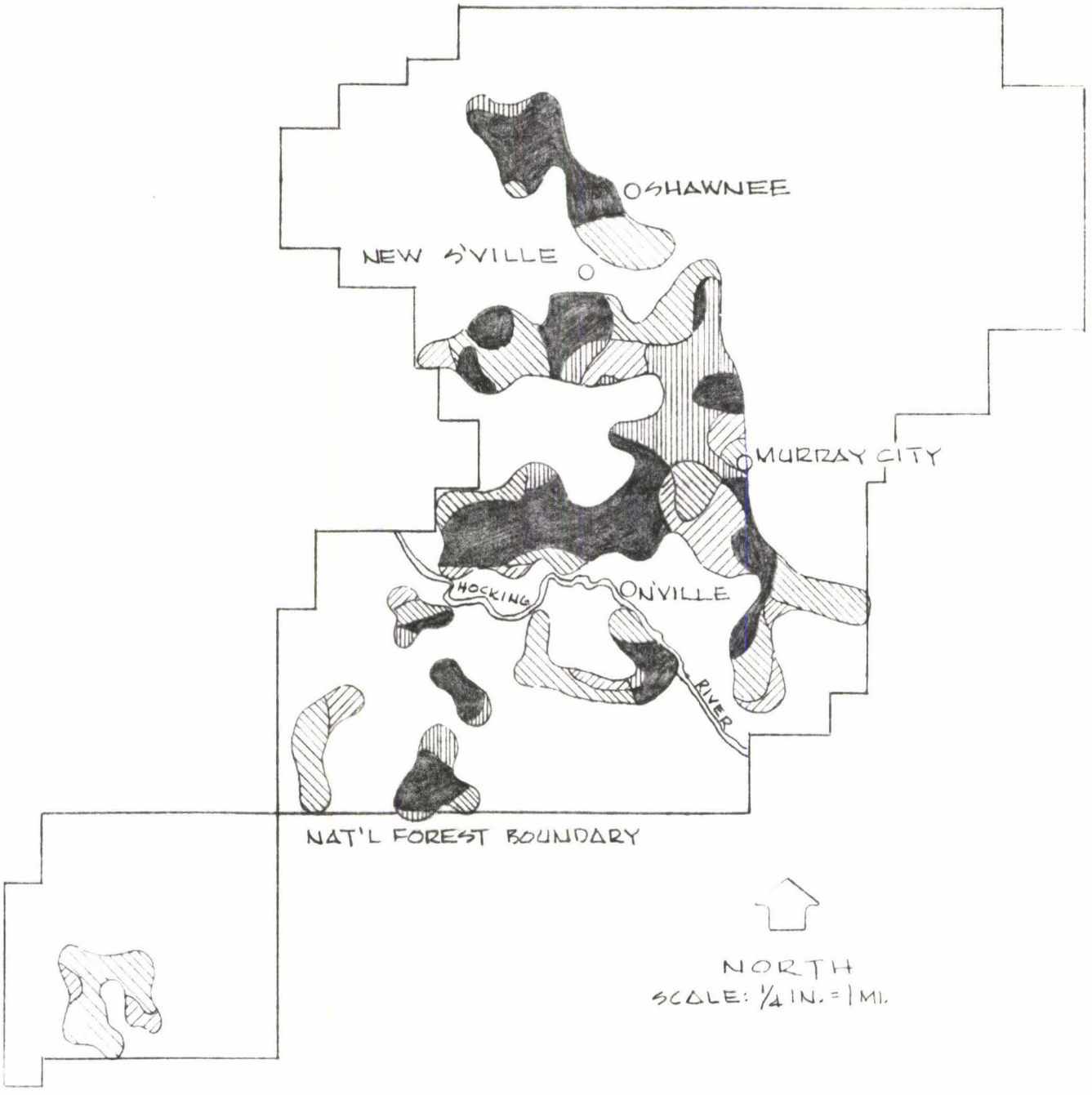
PATTERN OF STRIP MINED LAND
ATHENS UNIT - WAYNE NATIONAL FOREST

FIGURE 5



1982 PATTERN OF MOTORCYCLE USE ON STRIP MINED AND NONSTRIP MINED LAND
ATHENS UNIT - WAYNE NATIONAL FOREST

FIGURE 6



1982 PATTERN OF MOTORCYCLE USE BY LAND USE ASSOCIATION
ATHENS UNIT - WAYNE NATIONAL FOREST

Land manager concerns encompassed both the environmentalist/other recreationist's views and the industrialist's views. Land managers also expressed the need to eliminate motorcycle use from active timber sale areas and timber sale haul roads because of the danger to the motorcycle riders.

Motorcyclists, environmentalists, other recreationists, industrialists, and land managers all recognized the desirability of restricting motorcycle use to designated trails. Safety of the user, resource protection, and administrative manageability were seen as the primary reasons for restriction to trails.

SUMMARY OF DATA

Motorcycle users believed public lands should be open to their use. Easy access, challenging riding, large area, and environmental variety were considered to be critical to a successful motorcycle system.

The 1982 riding area affected 56,627 acres of land. Nearly three-fourths (71%) of the riding occurred on National Forest lands, and approximately one-half (28,570 acres) of the National Forest lands which were ridden had been previously affected by coal strip mining.

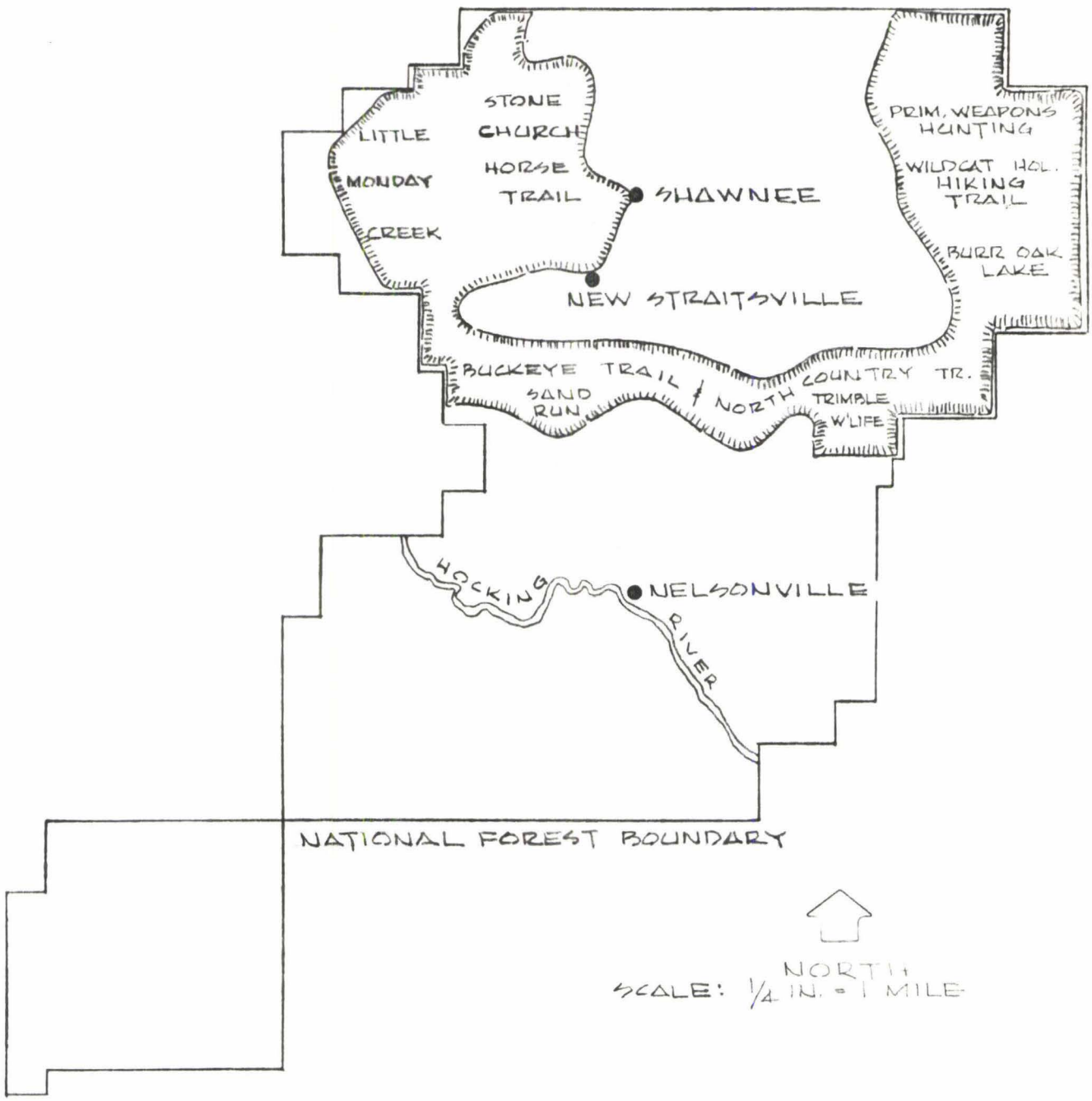
The 1982 motorcycle use pattern resulted from unrestricted use. Motorcyclists were free to select their own riding areas. As a result, motorcyclists' preference for access, challenge, area, and variety are represented by the 1982 use pattern. That preference included a need for 275 miles of trail at a density up to 1 mile of trail for every 100 acres of land.

Environmental groups, other recreationists, and industrialists did not express a desire to eliminate motorcycle use from Wayne National Forest lands on the Athens Unit. Those groups did express a need for the following use limitations.

1. Avoid sensitive areas.
2. Keep motorcycle use separated from other uses.
3. Limit the size of motorcycle use areas.
4. Stop erosion.
5. Protect animals.
6. Prevent vandalism to equipment.
7. Protect access roads from rutting and erosion.
8. Protect private land from abuse.

Wayne National Forest land managers echoed the environmentalist, recreationist, and industrialist concerns. In addition, managers expressed a need to keep active timber sale activities and motorcycle use separated. Figure 7 depicts the areas which were named or were perceived to be inappropriate for motorcycle use. Figure 8 combines the 1982 motorcycle use pattern with the inappropriate motorcycle use areas and highlights the area where the two overlap.

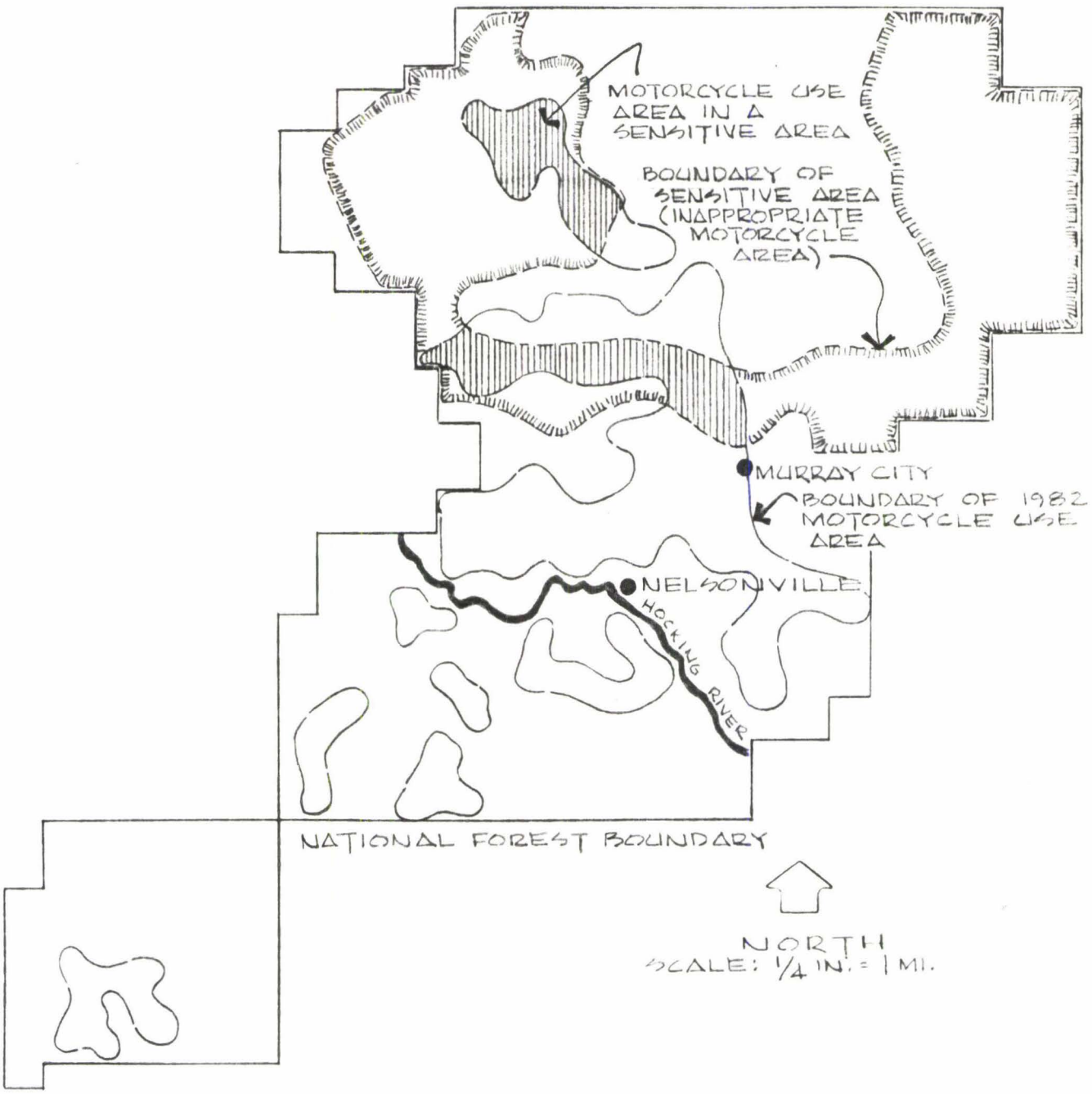
FIGURE 7



AREA WHERE MOTORCYCLE USE IS INAPPROPRIATE

ATHENS UNIT - WAYNE NATIONAL FOREST

FIGURE 8



1982 MOTORCYCLE USE AREA AND IDENTIFIED SENSITIVE AREA

ATHENS UNIT - WAYNE NATIONAL FOREST

ANALYSIS OF DATA

There were a considerable number of alternatives which would address motorcycle use of the Unit. However, input from all contacted subjects indicated five basic options were sufficient to cover all reasonable approaches. The five selected were:

1. No action. This alternative would continue to allow unrestricted motorcycle use.
2. Close the Athens Unit. This alternative would outlaw all motorcycle use except on public roads.
3. Open entire Athens Unit. This alternative would open all National Forest lands to motorcycle use, but the use would be restricted to designated trails.
4. Open designated areas with restrictions. This alternative would designate areas and restrict use to designated trails in the areas.
5. Open designated areas without restrictions. This alternative would designate areas, but would not restrict use to trails. Use could occur anywhere in the designated area.

The acceptability to the motorcycle user, the environmentalist and other recreationist, the industrialist, the land resources, and the land manager was rated for each alternative in Table 4. Judgment was used in assigning one of the three rating symbols. The rating symbols were then converted to a numerical rating.

Alternative 1 would be a continuation of the 1982 situation. The motorcycle riding locations and situations would be a product of the motorcyclists' previous riding. This alternative would be well received by the motorcycle rider, but it would be in conflict with other uses and sensitive areas. The numerical rating for this alternative was negative 4.

Alternative 2 would close the entire Athens Unit to motorcycle use except on public roads. Although this alternative protects other users, sensitive areas and the resources, it would be totally unacceptable to the motorcycle rider. In addition, such an alternative would be difficult, if not impossible, to administer. This alternative, with a numerical rating of 1, would be preferred over Alternative 1.

Opening the entire Athens Unit to motorcycle use on designated trails, Alternative 3, would be as acceptable to the motorcyclist as Alternative 1 if sufficient trail was provided. With careful location of the trails, this alternative could keep effects on other users and sensitive areas lower than could be done in Alternative 1. The negative 1 rating for this alternative resulted from the fact that no area of the Athens Unit would be free of the evidence of motorcycle use, and conflicts with other users would be inevitable.

TABLE 4

	CONCERNS	ALTERNATIVES 1	2	3	4	5
MOTORCYCLISTS	ACCEPTABLE USER ACCESS	+	−	+	+	+
	ADEQUATE CHALLENGE	+	−	+	+	+
	SUFFICIENT SIZE	+	−	+	+	+
	ACCEPTABLE VARIETY	+	−	+	+	+
ENVIRONMENTALISTS	AVOIDS SENSITIVE AREAS	−	+	−	+	+
	DOES NOT DISTURB OTHER ESTABLISHED USE AREAS OR ESTABLISHED USES	−	+	−	+	+
	VISUAL ACCEPTABILITY	0	+	−	0	0
INDUSTRY	AVOIDS OR MITIGATES EFFECTS ON OIL AND GAS OPERATIONS	−	0	0	0	0
	AVOIDS OR MITIGATES EFFECTS ON UTILITIES	−	+	0	+	+
RESOURCES	EFFECTS ON TIMBER PRODUCTION	0	0	0	0	0
	EFFECTS ON WILDLIFE	−	+	−	0	−
	EFFECTS ON EROSION (WATER)	−	+	0	+	−
ADMINISTRATION	ABILITY TO MAINTAIN PHYSICAL FACILITIES	−	0	−	+	−
	LAW ENFORCEMENT MANAGEABILITY	−	−	0	0	+
	TOTAL SCORE	-4	1	-1	9	5

RATING SCALE: + EQUALS 1; 0 EQUALS 0; − EQUALS −1

Alternative 5 would open areas to unrestricted use. Motorcyclists would be free to develop trails anywhere in the area by riding routes repeatedly. This alternative would be somewhat more restrictive to the motorcycle rider than Alternative 1. The dedication of sufficient area to motorcycle use would allow for a system very similar to Alternative 1, and Alternative 5 would be acceptable to the riders. Positive benefits would also result from the separation of motorcycle area from sensitive areas and other forest users. The "go anywhere in the dedicated area" aspect of this alternative would have negative effects on wildlife and soils.

With a numerical rating of 9, Alternative 4 would be the preferred and recommended plan to follow. With sufficient area and trail, the motorcyclists would be satisfied. By careful location of the areas where motorcycle riding would be allowed, sensitive areas could be avoided. Other users could identify motorcycle use areas and choose other areas of the forest for outings. Careful location of trails within designated areas would minimize effects on industry, wildlife, and soils.

SUMMARY AND CONCLUSIONS

Unregulated motorcycle use of the Athens Unit of the Wayne National Forest was not in compliance with the Presidential Executive Order. In addition, the use as defined in 1982 was building the potential for unacceptable resource damage and unacceptable conflict with other users of the forest.

Based upon the findings and within the limitations of this study, a plan which allows motorcycle use on the Wayne National Forest lands in the Athens Unit, but properly restricts the use to appropriate areas and trails, would be acceptable to the users of the forest and to the forest resources. Location of the use areas and the trails within the areas would be the next step in providing acceptable motorcycle use.

The future location of the use areas and trails should be accomplished in close concert with the people who provided input to the analysis in this study. This study's purpose was not to locate use areas and trails in detail. However, the analysis has given some general insights into acceptability. These insights will be used to develop management area descriptions, standards, and guidelines which will be used in the development of Forest Land Management Plan alternatives.

This study generally points to the following conditions for acceptable use areas.

1. Sensitive areas (Figure 7) should be avoided.
2. Use areas between the Hocking River and the Buckeye Trail and North Country Trail corridor were popular in 1982, and they will probably continue to be (See Figure 8).
3. Use areas southwest of the Hocking River (Figure 1) are too scattered to be easily manageable.
4. Motorcycle use north of the Buckeye Trail and North Country Trail corridor will have a potential for conflict with other forest users.
5. Approximately 275 miles of trail will be needed to satisfy motorcycle demand. The trails will affect 27,500 acres or more. (See Data Collected, Size and Mileage, Page 7 of this study.)
6. Private lands must be protected from motorcycle use which could "spill over" from National Forest use areas.

Information contained in this study will now be incorporated into the Wayne Forest Land Management, which is mandated by the National Forest Management Act. Alternative management prescriptions and standards and guidelines for the detailed location of areas and trails must be developed. This study will provide the nucleus for the preparation of those prescriptions, standards, and guidelines.

The Forest Plan preferred alternative will describe the exact areas where motorcycle use will be allowed, the conditions under which use will be acceptable, the development and maintenance standards, and the financial program needed to accommodate motorcycle use on the Wayne National Forest. The six conditions listed previously will be the ingredients for the final solution.

LITERATURE CITED

American Motorcycle Association. 1971. The Problem of Land Use; Off-Road Motorcycling is Experiencing Growing Pains That May Well Prove to be Terminal. AMA News, Land Use Supplement, November, 1971. p. 36.

American Motorcycle Association. 1980. Facts About Trail Riders. p. 1, 2.

Baldwin, Malcolm F. 1970. The Off-Road Vehicle and Environmental Quality; A Report on the Social and Environmental Effects of Off-Road Vehicles, Particularly Snowmobiles, with Suggested Policies for Their Control. Washington, The Conservation Foundation, 1970. p. 52.

Baldwin, Malcolm F. and Dan H. Stoddard Jr. 1973. The Off-Road Vehicle and Environmental Quality, 2nd Edition. The Conservation Foundation, Washington, D.C. p. 61.

Bury, R. Bruce. 1980. What We Know and Do Not Know About Off-Road Vehicle Impacts on Wildlife. University of Michigan Press. p. 111-113.

California State University. 1972. ORV Noise and Wildlife. Unpublished. p. 1, 5.

Chilman, Kenneth C. and Kazys Kupcikevicius. 1973. Profile: The Trail Bike. Unpublished. p. 1-20.

Cline, Darrell R. 1974. Wild Turkey Population Decline in Irish-Jackson Run Turkey Management Area. Unpublished. p. 1-4.

Feuchter, Roy. 1980. Off-Road Vehicle Use: The U.S. Forest Service Perspective. University of Michigan Press. p. 148.

Fialka, John. The Off-The-Road Menace. Environmental Quality, v. 4, April 1973. p. 37-44.

Harrison, Robin T. 1980. Environmental Impact of Off-Road Motorcycles. University of Michigan Press. p. 266.

Harrison, Robin T. 1974. Motorcycle Noise. U.S. Department of Agriculture, Forest Service, San Dimas, California. p.8.

Hope, Jack. The Invasion of the Awful ORV's. Audubon, v. 74, January 1972. p. 36-43.

Keursley, William. 1980. ORV User Conflicts. University of Michigan Press. p 236.

King, Frederick M. 1972. Indiana Motorcycling. Unpublished. p. 1-20.

McCoy, Roger E. and George H. Moeller. 1976. Compatability of Ohio Trail Users. Northeastern Forest Experiment Station, Research Note NE-225. p. 1-4.

McReynolds, H.E. and Robert E. Radtke. Undated. The Impact of the Motorized Human on the Wildlife of Forested Lands. Unpublished. p. 23-24.

Miller, Phillip. 1970. Case Study No. XVI; Off-Road Recreational Vehicle Composite. Public Land Policy and the Environment, Part III. Environmental Problems on the Public Lands, v. 3. Springfield, Virginia, National Technical Information Service, 1970. p 730-767.

Motorcycle Industry Council, Inc. 1973. Motorcycle Park Planning and Management. p. 13, 20.

Motorcycle Industry Council, Inc. 1979. Planning for Trail Bike Recreation. p. iii.

Motorcycle Industry Council, Inc. 1980. Motorcycle Statistical Annual. p. 4.

Nash, A.E. 1980. Nature Aesthetics, The Public Interest, and ORV User's Perspectives. University of Michigan Press. p. 17.

Rasor, Robert. 1978. Five State Approaches to Trail Bike Recreation Facilities and Their Management. American Motorcycle Association. p. v.

Watkins, T.H. 1969. Infernal Machines on the Public Lands. Cry California, v.4, Spring 1969. p. 6-19.

APPENDIX

A

INDEPENDENT DIRT RIDERS OF OHIO

We believe it is our right to use and enjoy our public grounds for off road trail riding and camping in the WAYNE NATIONAL FOREST area of Southern and Southeast Ohio.

Our primary use is for family and group trail riding using all terrain vehicles designed for the intended use.

We ask that we be considered in the "Land Use Plan" being developed and be allowed continued use and acccess to our land.

Name _____ Individual user _____

Address _____ Family/Group User _____

_____ How many riders over 16 _____

How many riders under 16 _____

Prime Use Is: Vehicles Used:

Camping _____ Off Road Motorcycle _____

Trail Riding _____ Dual Purpose Motorcycle _____

Enduro Riding _____ Dune Buggy _____

4W-D Truck _____

Other _____

Comments:

_____

_____

_____

_____

Please send me more information _____

Return to:

THE R. S. LYON COMPANY
2400 Dublin Granville Rd.
Columbus, Ohio 43229
ATTN: Dick Lyon

B

OPINIONS ABOUT MOTORCYCLE USE OF THE

ATHENS UNIT OF THE WAYNE NATIONAL FOREST

What use restrictions, if any, would you recommend in areas which are allocated for motorcycle use?

Are there areas of the Athens unit of the Wayne National Forest where you would not like to see motorcycle use occur? Be as specific as possible, and give reasons why, if possible.

Are there areas of the Athens unit of the Wayne National Forest where you feel motorcycle use would be O.K.? Be as specific as possible and give reasons why, if possible.

If motorcycle use is allowed in an area, would you place any seasonal restrictions on the use? What restrictions?

If motorcycle use is allowed in an area, would you place any restrictions on the use other than seasonal? What restrictions?

Space for any general comments you would like to make.

BIKE CLUB MEETING ATTENDANCE 10-18-82

C

NAME	ADDRESS	PHONE NUMBER	OCCUPATION
omer O'Neal	15 Ohio Ave The Plains O.	797-4478	Sheet Metal Worker
RRy Calendine	1 TROY ST ATHENS, O	59-2147	Electician
ICK LYON	8145 CO. RD. 40 GALION, OHIO	419-947-2851	IND. SALES FOR FARMER
Bill Gibson	710 Park Ave. Ironton, OH.	532-3222	U.S Forest Serv.
en Haberl	710 Park Ave. Ironton, Ohio	532-3223	US Forest Service
erry Hammond			
arl Bertolino	1615 J stret Bedford, Ind.	275-5987	U.S.F.S.
[illegible]	3179 FONTAINE RD.	837-[illegible]	son of ↓
[illegible]	3179 FONTAINE Rd	837 8908	WELDER
Bob Wanger	3255 Sitterly Rd, CANAL WINCHESTER, O	837-3228	ELECTRICIAN
ALAN SHILLER	6533 CASTLEWOOD DR CARROLL OHIO	756-9353	LITHOGRAPHER
KT PICKELHEIMER	1802 HIGHLAND AVE. PORTSMOUTH, O 45662	614-353-8463	MOTORCYCLE MECHANIC
KAEPPNER *	898 S. ROCK ST Columbus Ohio 43206	614-444-9600	ELECTRICIAN LU 683
by JANSON AMA	P.O. Box 141 Westerville Ohio 43084	614-891-2425	Environmental PLANNER
ary Coleman	Athens Ranger District	614-592-6644	USFS
Clifton E Moyer	Athens Ranger District	614-797-3158	Forester

12/6/82
C

Name	Group	Location
Gary Coleman	USFS	Athens
Janice Newman	IND. DIRT RIDERS	COLUMBUS
DICK LYON	IND. DIRT RIDERS	GALION
ART PICKECHEIMER	DISTRICT 11 M/C ASSN	PORTSMOUTH, OHIO
JAMES A. BENDER	DISTRICT 11	SCIOTOVILLE OH
HARRY CALENDINE	ATHENS M/C	ATHENS, O
GARY BENNETT	Hocking Valley M/C	LOGAN, Ohio
Tom Scholl	Hocking Valley M/C	Logan, Ohio
Homer O'Neil Jr.	athens M/C	athens Ohio
Richard V Walker	athens M/C	athens, Ohio
Bart Bertolino	Forest Service	Bedford, Indiana
Kevin Brown	Athens M/C + Husky	Athens
Ronald Brown	Wayne-Tygart 5 Strathmore Blvd, Athens, Oh 45701	
Jerry Greenwood	FS	Ironton
Ken Haberl	USFS	Ironton
Roy Janson	American Motorcyclist Association	Westerville Ohio
Rusty Kehlmeier	American Motorcyclist Association	Columbus Ohio
Bob Wargo	Hocking Valley M/C	Logan, Ohio
Larry Snider	Ind Dirt Riders	Carroll Ohio
Robert Kehlmeier	Hocking Valley M/C	Columbus Ohio

Name	Address	Town
Kevin Brown	5 Strathmore Blvd.	Athens 457